Is There Really a Funding Crisis?

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crisis n., 1 a) the turning point of a disease for better or worse b) an intensely painful attack of a disease

condition n., 5 a) state of health b) an illness, ailment (what's the patient's condition?) (1)

When I entered the transportation business in the 1970s, news headlines were already proclaiming a transportation infrastructure crisis. Several highly publicized bridge collapses and closings had awakened transportation officials and the media to the fact that many elements of our nation's transportation system were at the end of their useful life. The debate focused attention on road and bridge needs and resulted in increased investment levels for surface transportation. Since that time there have been episodic proclamations of a highway funding crisis, usually coinciding with an approaching congressional debate over reauthorization of federal transportation spending legislation. The 1997 and 1998 debates on reauthorization were no exception: organizations issued reports with such titles as *Crisis Ahead,* and various elements of the transportation industry made hyperbolic statements before Congress and the media.

It is my contention that this country is not experiencing a highway funding crisis, but that we do have a long-term condition that needs to be treated. The system preservation needs of the nation's highways and bridges are huge, and many elements of the Interstate system are wearing out. We are spending enough money on highways to maintain existing conditions, and the dramatic funding increase of approximately 40 percent in the Transportation Equity Act for the 21st Century (TEA-21) will provide even more funding for system preservation. In the long run, however, our transportation institutions must shift from being builders to being managers, and we must give priority to system preservation, instead of acting as if our problems can be solved by periodic infusions of new cash. This will be a difficult shift because, as Senator Lauch Faircloth (R-NC), a former state highway official, said in 1995, "the total pressure is on new roads . . . and new highway building, and not on the maintenance of the system we have. We built this as an interstate system, but the pressure on the highway commissioners, the Governors, and even the local highway administrators is to build new roads"(2).

Recognizing Improvements in Highway and Bridge Conditions

During the 1970s, measures had to be taken to preserve the enormous investment in the nation's highways and bridges, even as the Federal Highway Administration and the states were struggling to complete the Interstate highway system. Congress responded to the need in 1976, creating a new funding category for preservation of the Interstate system and dedicating more than $1 billion annually for bridge repair.

The condition of the Interstate system began to improve dramatically during the next decade and a half, with FHWA reporting to Congress in 1991 that "average conditions on the nation's arterial and collector system appear to have stabilized in 1989, stemming a continuous downward trend in physical conditions that was evident in the 1970's and early 1980's." FHWA attributed this stabilization to several factors, including the 1982 reauthorization, which had substantially increased funding while creating incentives for pavement rehabilitation. Bridge conditions also began to respond to dedicated federal funding that ranged

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from $1.5 to $2 billion in the 1980s. By 1990 the percentage of deficient bridges on the Interstates and major arterials had declined. The Intermodal Surface Transportation Efficiency Act of 1991 dramatically increased overall funding for highways, and dedicated substantial funding to Interstate maintenance ($3 billion per year), bridge repair and reconstruction ($2.7 billion per year), and support for improvements to a newly designated National Highway System.

By 1998 the U.S. Department of Transportation was able to report to Congress that highway and bridge conditions were improving or remaining stable. The percentage of poor pavement was declining on most systems, and the percentage of pavement in good and very good condition was increasing on all elements of the highway system. With respect to bridges, the conclusion of U.S. DOT's 1997 *Condition and Performance* report (3) is that bridge conditions have improved since 1990. The same report shows that congestion has stabilized.

Improvements in highway and bridge conditions have been accompanied by a shift in the way states spend federal highway funding. In the 2-year period from 1993 to 1995, the proportion of federal funding dedicated to system preservation increased from 45 to 50 percent, while that used for capacity expansion declined from 49 to 41 percent. At the same time, U.S. DOT was more rigorously applying cost-benefit analysis, which resulted in a reduction of forecast annual future investment requirements for highway and bridge maintenance from $49.9 to $43.1 billion annually. Coincidentally, $43.1 billion was also the amount being spent on bridge and highway capital outlay by all levels of government in 1995 (3).

Crying Wolf: Use of Aging Highways To Get Funding for New Roads

Why is the above good news not being met with delight? Should we not be patting ourselves on the back for far-sighted federal policies and for a gradual shift in priority from building a system to managing and maintaining the system we have? Instead, U.S. DOT's 1997 *Condition and Performance* report is being met with criticism. Road-building interest groups are asking Congress to require changes in the methodology used to prepare the report, and state DOTs are expressing great consternation over the report's findings. Those findings came at an awkward time for the transportation industry. The report documented success just when the industry was proclaiming a crisis of crumbling roads, and Congress was considering a new reauthorization. In addition, many transportation interests were arguing for the abolition of funding categories dedicated to system preservation in order to give the states more flexibility.

The Surface Transportation Policy Project (STPP) undertook an analysis to determine what states do with federal highway funding that is not dedicated to system preservation. To that end, we examined the use of obligation authority by the states in the flexible federal funding categories. We used fiscal year 1994 and 1995 data from FHWA's Financial Management Information System for federal funds, excluding obligations for Interstate construction, Interstate maintenance, and bridge funding. We found that states obligated about half (49 percent) of these flexible funds for new capacity, as compared with 44 percent of all ISTEA funds for new capacity in the same years.

If one looks at all levels of government spending, the picture is even more unbalanced. According to FHWA's *1994 Highway Statistics (4)*, about 52 percent of capital outlay spending on highways by all units of government in that year went for new capacity. By and large, it appears that the transportation industry constructs arguments about an impending crisis and crumbling roads to help secure passage of tax increases and higher highway funding allocations, and then invests the majority of this funding in new capacity. Thus system preservation is deferred, and the crisis is set aside for the next time more funding is desired.

I believe this spending pattern represents misplaced priorities in response to political pressure. There is more money to be made from building new roads than from preserving old ones—not only in design contracts, materials, and construction, but also in the land development that follows new highway facilities into greenfield areas. As the old saw goes, "It's hard to cut a ribbon on a patched pothole." Unfortunately, I believe the higher priority accorded new roads reflects the demands of the industry, not the desire of the public, which appears to assign top priority to smooth pavement.

Getting Realistic About Highway Needs

In 1978 Congress required U.S. DOT to prepare and submit a biennial report on the status and con-

dition of the nation's roads and bridges. The *Condition and Performance* report (commonly referred to as the "Needs Report") presents data on both the physical condition and the performance of the nation's highway system, along with considerable financial information. In recent years the report has been expanded to include public transit, and its estimates of future financial needs have been widely used to justify funding increases. In the past, the report presented two estimates of future financial requirements: an estimate that represented the cost to maintain existing physical conditions and an estimate of funding needed to improve the system to a maximum level. Both estimates combine system preservation and capacity expansion, although capacity expansion in the cost to maintain has been limited to maintaining existing levels of service.

During the past several years, U.S. DOT has attempted to improve these estimates by employing cost-benefit analysis and other economic principles. As a result, the 1997 *Condition and Performance* report contains two estimates of financial requirements—one titled Maintain User Costs and the other Maximum Economic Investment. Both estimates presume capacity expansion as a straight-line response to growth in vehicle miles traveled (VMT), although the Maintain User Costs estimate seeks only to expand capacity sufficiently to keep user costs constant, while the Maximum Economic Investment estimate includes all capacity expansion projects found to be cost-beneficial from a strictly highway transportation perspective (not within a broader social or environmental context). The most recent projections in the 1997 report are shown in Table 1.

As noted earlier, the 1997 report also documents a total capital outlay of $43.1 billion on highways and bridges from all levels of government in 1995. Coincidentally, this figure is enough to meet the Maintain User Costs requirement if invested in the ratios shown in Table 1, and is nearly enough to meet the system preservation needs under the Maximum Economic Investment estimate. In fact, the additional annual requirement for system preservation would be approximately $6.4 billion, about a 15 percent increase in overall funding levels. As noted, TEA-21 increases federal funding by about 40 percent, which takes the country a long way toward what should be its primary highway mission: preserving the enormous sunken investment in the existing Interstate and arterial systems.

Most groups that use these reports, however, do so by combining the capacity expansion and system preservation estimates into one estimate of "needs." This commingling creates a muddle, for while everyone agrees on the need to maintain the nation's existing infrastructure, there is considerable disagreement about whether adding highway capacity is an appropriate response to increases in highway travel.

TABLE 1 Estimated Financial Requirements

Investment Estimate	System Preservation	Capacity Expansion
1996 Maintain User Costs	29.1	14.0
1996 Maximum Economic Investment	49.5	24.2

Note: The projections are based on data for 1993–1995 and begin with 1996, going forward 20 years.

Leaving Policy to the Policy Makers

Use of a national model to estimate system preservation requirements is an appropriate analytical exercise for U.S. DOT, as it allows for the estimation of funding requirements for a national policy priority. Use of an economic model to estimate highway capacity expansion needs at the national level is far more problematic. Whether the United States should attempt to address peak-hour congestion by adding highway capacity as a matter of national policy is highly debatable given the requirements of the Clean Air Act and the emerging constraints imposed by the Kyoto accord on climate change. At the very least, U.S. DOT should not use a cost-benefit model that treats social and environmental costs as externalities, or fails to incorporate the relationship between travel demand and the transit investment model.

A closer look at the demand model reveals a number of troubling assumptions. Commendably, the Highway Economic Requirements Model acknowledges for the first time that the provision of highway capacity in and of itself induces additional highway travel. That model still presumes, however, that the additional travel has a benefit, even though from an economic perspective it may be induced by an oversupply of capacity. Moreover, the model estimates $10 billion in annual capacity expansion costs due to the growth of metropolitan areas. Providing highway capacity to serve urban sprawl is, however, increasingly seen as a policy choice, not an engineering choice, and many argue that transportation investment should instead go to improving levels of service in existing communities. Similarly, the model makes

modest estimates of the impact of intelligent transportation systems in reducing the need to expand capacity, even though FHWA estimates that two-thirds of capacity requirements in America's 50 largest metropolitan areas could be met with an investment of only $10 billion in ITS improvements, as compared with $150 billion in highway capacity projects.

All of the above assumptions represent policy choices, and the question of whether capacity should be expanded is increasingly a matter of local or state, not national policy. Indeed, even the assumption that federal capital ought to be available for highway capacity is open to debate as options emerge for private capital investment in highways, and evidence mounts that new highway capacity investments offer primarily a local economic advantage, not a broad national productivity gain.

Conclusion

At the very least, we should be clear on one point: from a national policy perspective, the top priority should be preserving the existing system. We are collecting nearly enough money to do so at the present time, but our transportation institutions continue to favor highway capacity expansion over system preservation. While there is no highway funding crisis, there is a highway funding condition that requires long-term treatment. The treatment I would prescribe can be summarized in three words: "Fix it first." Accomplishing this will require shifting the nation's highway agencies to a new mission of maintaining and managing, not building.

References

1. *Webster's New World Dictionary, Third College Edition.* Simon & Schuster, New York, 1993.
2. Faircloth, L. Environment and Public Works Committee Hearing, U.S. Senate, February 23, 1995.
3. U.S. Department of Transportation. *1997 Status of the Nation's Surface Transportation System: Condition and Performance.* Washington, D.C., 1998.
4. Federal Highway Administration. *1994 Highway Statistics.* U.S. Government Printing Office, Washington, D.C., 1995.

Bibliography

American Automobile Association. *Crisis Ahead: America's Aging Highways and Airways.* June 1996.

Bryant, B., *Public Roads.* Vol. 61, No. 5, March–April 1998:1.

Surface Transportation Policy Project. *Crying Wolf: The False Crisis of America's Crumbling Roads and Bridges.* Washington, D.C., 1996.

Surface Transportation Policy Project and Environmental Working Group. *Potholes and Politics.* Washington, D.C., 1997.

U.S. Department of Transportation. *1995 Status of the Nation's Surface Transportation System: Condition and Performance.* Washington, D.C., 1995.